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AUTHOR Edirisooriya, Gunapala; Sevier, Lou Ann
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ABSTRACT

The dependency of public institutions of higher education on state tax dollars is a major source of financial instability as other state agencies demand more tax dollars for other purposes. This paper presents a new formula for higher education funding and discusses the rationale and implications of implementing the new solution, which will allow institutions to move from a survival mode to being self-sufficient operating units. The situation in Tennessee is complicated by the fact that the state has a legislative mandate to balance the budget. Higher education administrators are in a quandary about how to improve the quality of programs in light of the accreditation requirements and competitive market conditions as they reduce operating expenses. The paper proposes the replacement of the full-time equivalent (FTE) enrollment-based, state allocation of funds. The basis of the new formula is that the state must guarantee each of its institutions the average total allocation of funds from the last "X" number of years during the inaugural year of the plan. In the next 2 years, the dollar amount each institution receives will remain constant, giving the institutions ample time to prepare and embark on strategic development plans. In order for this "new formula" to work, emphasis on funding must be changed from sustenance to self-sufficiency by reducing the state's disposable funds for higher education by a given percentage after the first 3 years the system is in place. This way each institution is allowed to decide its enrollment size, and each institution can then design its path with more realistic expectations. (Contains 1 table and 18 references.) (SLD)

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Gunapala Edirisooriya
Lou Ann Sevier

College of Education
East Tennessee State University
Johnson City, TN 37614-0685
edirig@etsu.edu

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State Funding of Higher Education: A New Formula

State related institutions of higher education continue to grapple with the age-old issue of funding. The problems with funding are only getting worse, as the current system is failing. It is time to take a visionary step and formulate a realistic solution. Currently, state institutions of higher education are heavily dependent on the state for funding (Southern Regional Education Board [SREB], 2001). According to 1996-97 figures, 40% of general revenue of public four-year colleges comes from state allocations in the US. This rate is 3% higher for the SREB states, and for TN this rate is 48.3%. During the last three decades as a percentage of state taxes, state allocations to higher education have declined in the US, SREB, and TN--an indication of greater demand for state tax dollars by other state agencies. This dependency is a major source of financial instability among institutions of higher education. A viable solution is needed to ensure long-term benefits for both the state and the state related institutions of higher education. The solution proposed and outlined here probes into the history of higher education funding, highlights current problems, presents a new formula and discusses the rationale and implications of implementing the solution. The proposed solution will allow institutions to transform from a survival mode to self-sufficient operating units.

To understand the need for such a solution, one must look at the historical data. From colonial times, many colleges followed in the footsteps of Harvard College (Morison, 1968) and solicited funds from respective local administrations, and this tradition continued in the new nation. Dartmouth College provides a compelling example (Novak, 1971; Whitehead 1973). Even after Dartmouth College won its case in 1818 (challenged New Hampshire General Assembly on its private ownership), it went right

back to the New Hampshire State Assembly seeking financial assistance. With the Morrill Act of 1862, a new category of higher education institutions emerged with statutory provisions for state funding. From the colonial era, some colleges and universities recognized the importance of financial security for institutional stability and growth (Veysey, 1970). These institutions also realized that financial solvency is a prerequisite for institutional autonomy and embarked upon establishing endowment funds for their operations. Some of them succeeded. It would be quite inspirational to learn from those institutions, especially the state related institutions that gradually gained financial independence. The University of Delaware (UD) is a case in point (Munroe, 1984; Edirisooriya, 2001). In the first two decades of the 20th century, UD was struggling for its survival, and in 1906 it was even eager to hand over the full ownership of its assets to the State Government in return for state financial support for UD's operational expenses (Edirisooriya, 1991). In contrast, UD's reliance on state allocation of funds is now limited to one fifth of its operational budget. For UD, this financial success secured a great degree of institutional autonomy (University of Delaware, 2001). An overwhelming majority of state related institutions of higher education has not found this magic formula for financial stability, and their struggle for survival continues.

Generally, the ability to finance state related institutions of higher education depends on the health of state coppers, which in turn depends on economic conditions of states. Consequently, economic fluctuations at the state level can impose serious threats to financial viability of state related institutions of higher education. Recent history bears ample evidence. A cursory look at the 1970-80 period would indicate the vulnerability of heavy reliance on state financing of higher education in states such as Alabama, Georgia, Illinois, Maryland, Michigan, Mississippi, New York, Pennsylvania, Tennessee, and Washington (Slaughter, 1987). Many states gained some financial relief

from the overall economic progress of the 1990s, but states like Tennessee (TN) continue to struggle (Southern Regional Education Board, 2001). Tennessee legislators continue to debate on the path to financial stability. Some arguments include: 1) in the absence of a state income tax, TN relies heavily on sales tax revenues. Therefore, the answer lies in a state income tax. 2) State expenditure is rising faster than the growth in state revenue. Therefore, the solution lies in measures to control state expenditure. 3) Introduction of a state lottery is the solution to financing state's educational needs, P-12 and post secondary. 4) Expand state sales tax base to include many services and wipe out tax loopholes hitherto enjoyed by the private sector. 5) Increase all types of existing taxes by a given percentage, and so on.

For the last six years, Tennessee Board of Regent's higher education institutions have been financed at about 93% of the eligible level (Tennessee Board of Regents, 2001). Furthermore, funding for higher education in TN as a percentage of the state's budget has been declining. During the period from 1991-1992 to 1999-2000, the percentage of state allocation for higher education declined from 15.1% to 14.7% (Southern Regional Education Board, 2001). The adverse impact of such a decline becomes clear when one considers the rapid advances in information technology during this period, which in fact create more funding needs for higher education institutions. Latest data show that TN places at the bottom among the southern states in terms of per student allocation of state funds (Southern Regional Education Board, 2001). Ironically, the current economic woes are going to have an adverse impact on the level of state allocation further. Tennessee is in a peculiar situation. It has a legislative mandate to maintain a balanced budget. Under the conditions of ever increasing state expenditures and no additional tax revenues, balancing the state budget in recent years has become a nightmare. Last year, Governor Sunquist's attempt to introduce an income tax with a reduction in sales tax found stiff resistance from state legislators (Sunquist, 2001). The

state assembly managed to pass a "patch-work budget" for 2001 – 2002. Partly stemming from the current economic slump in the state, the forecast of a short fall of revenue this year seemed to have awaken some law-makes to pursue the possibilities for re-structuring sources of state revenue. Even if current efforts to re-structure the sources of state revenue succeed, the relief will be short-lived and the dependency of state related institutions of higher education on state funding would continue. Therefore, higher education institutions are faced with increasing costs and options for increasing revenue are very limited (Curry, 2001). Given this scenario, higher education administrators are in a quandary on how to improve the quality of programs in light of accreditation requirements and competitive market conditions while they are forced to cut down operating expenses.

When faced with such a question as funding most people would ask the common sense question: does anyone run a business enterprise like the way we run state related higher education institutions? While the idea that higher education institutions should be run like a business enterprise is not being endorsed here, there is an underlying rationale in such an argument (Manne, 1975). Stability is a prerequisite for long-term viability of any operation. Higher education institutions seem to operate on a crisis mode from year to year. While legislative bottlenecks and political tug-of-war continue to hamper any attempt to bring about a framework for fiscal stability, administrative policies in higher education also seem to impose major barriers against establishing a financially viable higher education system in many states. Such barriers include, among others: enrollment driven state allocation of funds, lack of incentives for securing financial solvency and unhealthy financial management policies.

Major sources of operating funds of state related higher education institutions are: state allocations, tuition fees, grants and awards, and fund raising. Allocation of funds to state related institutions of higher education (the major source of revenue of

many state related institutions of higher education) depends on a number of criteria. Critical variables include: student enrollment, student performance on mandated tests, institution-based performance funding (program accreditation), projected state revenue collections, budget requests by sister institutions for capital expenditure and so on. As state allocations are made on projected revenues of state coppers, any downfall in state revenue calls for retrenchment of allocated funds from higher education institutions by the state. This practice breeds far-reaching consequences.

Generally, in March of every year, departmental units prepare budget requests for the following fiscal year. It is also customary to receive various directives from university hierarchy on various constraints and parameters to keep in mind in budget preparation. Inevitably, as enrollment count is a major criterion of state allocation of funds, planned activities revolve around ways to boost student enrollment. Notwithstanding all the fancy statements of mission, vision, belief, values, and the like, "Show me the numbers" seems to be the only driving force behind every "rational" decision of these institutions. Routinely, in the middle of the fiscal year, the panic button is pushed and a distress call is in effect by university hierarchy, "State revenue collections are falling behind the projected revenues; therefore, we have to cut back X% of budgeted funds." So, in every unit in every college, any effort to improve quality goes out the window and only the quantity improvement measures survive. Hiring freeze of new faculty and or stalling the replacement of current salary lines comes into effect. Faculty travels are to be curtailed. Supplies are to be restricted. Maintenance works are to be postponed. This happens year after year. This method of funding ignores a basic rule of system operation--there is virtually no single variable cost that can be adjusted as enrollment goes down a few percentage points. No need even to think about adjusting fixed cost when there is a slight decline in enrollment. So, inevitably, the effect of lack of funding manifests on quality improvement in higher education. All "rational" decisions

are geared toward one major objective: to increase fulltime enrollment (FTE) counts. Do our policy makers in higher education care to think about the effects of this mode of operation? Or, do our policy makers in higher education worry about the way we run higher education institutions? When will our higher education policy makers understand the damaging impact of enrollment driven allocation of state funds to institutions of higher education? Why does such a damaging system survive? Why are policy makers scared to take the bull by the horns? Not broken enough to fix the funding system yet! Or, political ramifications of such action are beyond comprehension and therefore, no one dares to entertain any thoughts on fixing the problem.

Some politicians may adore this system of financing higher education, because they can maintain a firm grip on higher education. Every higher education institution becomes the whipping boy of local politicians, state assembly and other powerful political lobbyists and organizations. They can give various commands to the higher echelon of institutional administration in return for "taking care of institutional funding needs." Such commands range from trivial personal issues of a voter to a major "political" concern with academic programs. At an institutional level, the higher echelon of administration at some institutions may find this operational system rather irresistible because of the enormous power bestowed upon them by uncertainty and financial instability--a system of crises-driven management seem to attract some devotees! The higher echelon of administration at these institutions may resort to numerous arm-twisting tactics--"Requests for additional funds have to be directly tied to improvements in enrollments." Eventually, increasing full time equivalent (FTE) enrollment becomes the sole responsibility of department chairs and individual faculty. Faculty are forced to believe that increasing FTE enrollment means ensuring Full Time Employment (FTE) for faculty. History repeats itself in wonderful ways! In 1858, in the midst of a financial calamity, the UD president promised his faculty, "For every student you recruit, I will pay

you 50% of his tuition" (Minutes, 1858). Unfortunately, the 21st century is no different! For the sake of creating an environment conducive for the long-term survival of state related institutions of higher education, it is essential to establish solid financial foundations for those institutions. We must replace policies geared toward quantity improvement with policies geared toward quality improvement. In this vein, the following method of funding for state related institutions of higher education is proposed.

1. It is time to replace the FTE enrollment based state allocation of funds to institutions of higher education. I propose a simple formula. Assume that under the prevailing conditions, the state's current method of allocation of funds provides the optimum dollar amount to each institution of higher education. This includes funds from all sources: FTE enrollment count, categorical, performance-based, allocation on fixed assets and so on - the grand total of funds an institution receives from the state. This is the basis of the new formula--a very simple one. The state must guarantee each of its institutions the average of the last X number of years (e. g., three years) of state total allocation of funds to each institution for the inaugural year. In the second and the third year of its operation, the dollar amount each institution receives remains constant. This will guarantee each institution to receive a constant dollar figure for three consecutive years and provide an ample time frame for each institution to prepare and embark upon a strategic development plan based on institutional mission.

2. Emphasis of funding has to be changed from sustenance or survival to self-sufficiency (=financial autonomy). One strategy would be to reduce state's disposable funds for higher education on a set formula after the initial period of three years. Starting from the fourth year, the state will reduce the size of this disposable dollar amount by a constant percentage. Consequently, in year four, the amount of funding each institution of higher education receives will be adjusted by a given percentage downward (-x%). This discount rate has to be established at the time of implementing this funding formula,

and it is to be remained fixed. In the future, this discount rate can be changed (downward or upward) only if the economic conditions warrant.

3. This funding formula provides long-term stability for state funding of higher education for both the state and the state related institutions of higher education. Share of the higher education funding of total state expenditure is contained within a certain limit and is most likely to go down as the total state spending goes up. Over the years, as the total disposable dollar figure for state funding of higher education goes down, the state can accumulate a reserve fund (using annual discount rate of x%) that can be used in leaner years. This reserve fund can be used for purposes of funding higher education only for example, to supplement any shortfall in total disposable amount for higher education in years of economic downturns as well as to provide supplemental allocations to institutions as incentives for raising external funds (grants, endowments, gifts, etc.). In the long run, accumulation of a sizable reserve fund will provide many options for the state government. A mathematical formulation of the proposed funding formula is presented in Appendix A and a simulated funding needs for 20 years assuming discounts rates of 0.1% and 0.2% is given in Appendix B.

4. In effect, this system of funding dictates that each institution should be allowed to decide its size of enrollment. Consequently, each institution can design its size of operation and expansion path in light of more realistic resource projections. Higher education institutions will welcome the opportunity to devote its resources toward quality improvement rather than to engage in a rat race to increase enrollment by hook or by crook. The positive impact of this scenario is quite compelling. Academic programs can be selective in admission decisions. Quality-candidates are a prerequisite for producing quality-graduates. This funding method is bound to create opportunities for addressing some of the widespread criticisms of higher education such as watered-down curricula,

relaxed-assessment standards, low-quality graduates, grade inflation, and so on (Stone, 1995).

5. This funding method also paves the way for each institution to set its tuition fees. Higher education market is (and should be) driven by the quality of its service. As each institution can take measures to improve its quality and to decide the size of its operation, it will enjoy the power to set the price for its services. The forces of free market economy decide the destiny of each institution. This will create possibilities for state related institutions of higher education to be more efficient. Waving TQM banners is a fruitless exercise while keeping both hands and feet of these institutions tied together. Rather, conditions must be provided for quality improvement. Periodic accreditation procedures at various levels (institutional, college, departmental, and program) are sufficient to safeguard academic, social, and ethical issues.

6. As long as higher education institutions follow state's financial rules and procedures in spending state allocated funds, the state has no reason for alarm. Nevertheless, it is important to point out that some current budgeting practices encourage wasteful spending. For example, zero-sum financial management practice encourages every unit to spend every dollar of the allocated funds, irrespective of utility. In the private sector or among households, a prudent practice in financial management is to save money and build investment portfolios. In the public sector, saving is a taboo and spending all available funds is the rule. Toward the end of fiscal year, each unit operates in a panic mode to spend account balances (buying various "stuff") because any remaining positive balances at the end of fiscal year cannot be carried forward for next year. Under this system, there is no incentive to save and to carry forward any balance to accumulate funds for the future—saving is penalized. Each unit should be encouraged to save budgeted funds and a mechanism should be in place to encourage and reward such efforts. In this proposed system, saving of budgeted funds will be an integral part. There

is no point in trying to defend a bureaucratic quagmire (bureaucratic trivia, rules and procedures, administrative divisions, cadres, paperwork, and so on) created by the existing set of funding criteria. The proposed funding formula will drastically reduce fund-administration cost and related bureaucratic bottlenecks. A comparison of the current funding method and the proposed formula is synthesized in Table 1.

Table 1 appears about here.

This funding formula provides an ideal framework for policy makers and legislators, as it guarantees to contain higher education funding within a certain limit in the short run and to minimize its growth in the long run. Furthermore, policy makers should consider this funding formula very seriously for one simple reason--this system of funding creates incentives for quality improvements in higher education. Institutions of higher education will know the amount of funding to receive from state coppers each year and these institutions can establish and follow a long-term plan of development. State related institutions of higher education must embark upon a vigorous development-funding program to strengthen institutional resources needed for its development plan. In effect, this funding formula offers an opportunity for state related higher education institutions to take charge of their own destiny. "They do not give us enough money" is a perennial complaint that never seems to disappear from the vocabulary of the higher education administrators. The current system of funding is structured in such a way the dependency of state related institutions of higher education on state funding is perpetually sealed--a system of funding that guarantees to increase the burden on state taxpayers. Eventually, with the proposed formula, state related institutions of higher education gain financial autonomy while the state will no longer be required to carry on a limitless burden of financing higher education institutions.

Some may have a vested interest in the current system of fund allocation to state related institutions of higher education. It would be wise for them to understand that the current form of state funding of higher education is on a collision course. "If it ain't broke, don't fix it" can no longer be used as a shield to hide behind and to oppose reforming the current system of higher education funding. It is much easy to cling onto methods and systems, which we are all too familiar with. To change the status quo we need to take bold and visionary steps. Innovative ideas are to be judged by their quality and not by any other criteria. In any event, it is high time for our policy makers to consider alternatives to the current system of funding based mainly on FTE enrollment counts. By probing into the history of higher education funding, highlighting the financial woes of state related institutions of higher education, presenting a new and simple formula for funding these institutions and discussing the rationale and the implications of implementing the proposed funding formula, this paper aims to ignite some interest among higher education policy makers on reforming the existing state funding formula in the interest of growth and stability in the higher education sector.

References

Curry, D. (2001, July 27). How a university system won a spurt of spending in a state known for frugality. The Chronicle of Higher Education, p. A20.

Edirisooriya, G. (under review). State-University relationship: The case of the University of Delaware.

Edirisooriya, G. (1991, April). A historical analysis of the state-university relationship: A case study of the University of Delaware. Paper presented at the American Educational Research Association Annual Meeting, Chicago, IL.

Manne, H. G. (1975). The economics of legal relationships: Readings in the theory of property rights. St Paul, MN: West Publishing Co.

Minutes of the University of Delaware Board of Trustees, Vol. 1, July 06, 1858. Newark, DE: University of Delaware Archives.

The Morrill Act. (1862). Available: http://www.usinfo.state.gov/usa/infousa/facts/democrac/demo.htm.

Morison, S. E. (1968). The founding of Harvard College, 2nd ed. Cambridge, MA: Harvard University Press.

Munroe, J. A. (1984). History of Delaware. 2d ed. Newark, DE: University of Delaware Press.

Novak, S. J. (1971). The college in the Dartmouth College case: A reinterpretation. The New England Quarterly, 47(4), 550-563.

Slaughter, S, (1987). Continued efforts to cope with declining resources: Selected post-secondary education systems in the United States and Canada, an introductory essay. Higher Education, 16(2), 125-134.

Southern Regional Education Board. (2001). Higher Education Finance and Budgets. Available: <http://www.sreb.org/main/EdData/DataLibrary/highered/finance/finance.asp>

Stone, J. (1995). Inflated grades, inflated enrollment, and inflated budgets: An analysis and call for review at the state level. Education Policy Analysis Archives, 3(11). Available: <http://epaa.asu.edu/epaa/v3n11.html>

Sunquist, D. (2001) FY 2001-2002 Budget Document. Available: http://www.state.tn.us/finance/bud/overview/buddoc.html

Tennessee Board of Regents (2001). Basic Facts. Available: http://www.tbr.state.tn.us/basic_facts.htm

Tennessee Higher Education Commission (2001). The Status of Higher Education in Tennessee. Available: http://www.state.tn.us/thec/C2001_2.pdf

University of Delaware. (2001). Facts and Figures. Available: http://www.irp.udel.edu/ir/fnf/98-99/stprof

Veysey, L. R. (1970). The emergence of the American University. Chicago: The University of Chicago Press.

Whitehead, J. S. (1973). The separation of college and state: Columbia, Dartmouth, Harvard, and Yale 1776-1876. New Haven, Connecticut: Yale University Press.

Appendix A

Let X_t be the amount of funding a state allocates to its higher education institutions in year t. For any given institution, the annual state allocation of funds is given by X_{it}. So, the total allocation of state funds is equal to the sum of allocation to each individual institution i.e.,

$X_{it} + \ldots\ldots\ldots\ldots\ldots + X_{jt} = X_t$ (1)

In the new formula, in year t+1, the amount of state allocation for higher education institutions is based on the average of the three previous consecutive years' allocations, which is,

$(X_{t-2} + X_{t-1} + X_t) / 3 = X_{t+1}$ (2)

Similarly, a higher education institution's state allocation for the year t+1, will be,

$(X_{it-2} + X_{it-1} + X_{it}) / 3 = X_{it+1}$ (2a)

The dollar amount of state allocation of funds to its higher education institutions in year t+1 will continue to be applied for year t+2 and year t+3.

In the year t+4, state will reduce its allocation of funds by -x%. For example, the discount rate is set at 0.1%. So, in the year t+4, the amount of allocation will be equal to,

$(X_{t+3}) * 0.999 = X_{t+4}$ (3)

Similarly, in year t+5, the amount of state allocation will be,

$(X_{t+4}) * 0.999 = X_{t+5}$ (4)

$(X_{t+3}) * (0.999)^2 = X_{t+5}$ (5)

Equation (5) and equation (5a) are equal.

Similarly, the equations 3, 4, and 5 can be equally applied to any institution within the state simply by adding institutional subscript i.e.,

$(X_{it+3}) * 0.999 = X_{it+4}$ (3a)

$(X_{it+4}) * 0.999 = X_{it+5}$ (4a)

$(X_{it+3}) * (0.999)^2 = X_{it+5}$ (5a)

So, for any given year, the amount of state allocation of funds to higher education would be equal to,

$(X_{t+3}) * (0.999)^n = X_{t+n}$ (6)

For the state, for any given institution of higher education, and for any given year, this funding formula can predict the amount of state fund allocation. For example, if we assume a 0.1% rate of discount and state allocation of funds to its higher education institutions in year t+3 as $1,000,000,000, then in t+4 state allocation would be,

$(\$1,000,000,000) * (0.999)^1 = \$999,000,000$ (7)

Likewise, in t+23 state allocation of funds to its higher education institutions will be,

$(\$1,000,000,000) * (0.999)^{20} = \$980,188,865$ (8)

Similarly, if a higher education institution in year t+3 receives $100,000,000 as state allocated funds, then in year t+4 this institution will receive,

$(\$100,000,000) * (0.999)^1 = \$99,900,000$ (7a)

In year t+23 this institution will receive,

$(\$100,000,000) * (0.999)^{20} * = \$98,018,886$ (8a)

In this example, this institution will lose about $2,000,000 in the year t+23. To generate $2,000,000 in year t+23, this institution must plan to raise about 20 million dollars (assuming a 10% rate of return on invested funds) by year t+22. In effect, in every consecutive year, this institution must plan to raise an additional one million dollars more than the amount of dollars raised in a previous year. One caveat is in order. This funding formula does not take into account the inflation factor. This is not an omission. Destiny of higher education must be placed in the hands of higher education administrators and not on taxpayers. It is the responsibility of higher education administrators to plan operational activities by taking into account inflationary effects. This formula guarantees a steady stream of funds from state governments to higher education institutions and operational decisions are left for each institution.

It must be emphasized that this formula alone will be not be sufficient to bring financial stability to state related institutions of higher education. Coupled with this formula, statewide streamlining of programs and fields of studies is necessary at the state level. Each institution must be able to make all administrative decisions with no state interference--each institution is in charge of its own destiny. This includes all spheres of internal administration: size and the composition of enrollment, the setting of tuition fee and other charges, decisions on fund raising, investments, disbursements and so on.

Appendix B

This table provides 20-year simulated data for a state that provides a total of $1,000,000,000 for its higher education institutions in year t+3, using two discount rates, 0.1% and 0.2%

Y_{t+}	X	Z ($)
1	0.999	999,000,000.00
2	0.999	998,001,000.00
3	0.999	997,002,999.00
4	0.999	996,005,996.00
5	0.999	995,009,990.00
6	0.999	994,014,980.01
7	0.999	993,020,965.03
8	0.999	992,027,944.07
9	0.999	991,035,916.13
10	0.999	990,044,880.21
11	0.999	989,054,835.33
12	0.999	988,065,780.49
13	0.999	987,077,714.71
14	0.999	986,090,637.00
15	0.999	985,104,546.36
16	0.999	984,119,441.82
17	0.999	983,135,322.37
18	0.999	982,152,187.05
19	0.999	981,170,034.86
20	0.999	980,188,864.83
1	0.998	998,000,000.00
2	0.998	996,004,000.00
3	0.998	994,011,992.00
4	0.998	992,023,968.02
5	0.998	990,039,920.08
6	0.998	988,059,840.24
7	0.998	986,083,720.56
8	0.998	984,111,553.12
9	0.998	982,143,330.01
10	0.998	980,179,043.35
11	0.998	978,218,685.27
12	0.998	976,262,247.89
13	0.998	974,309,723.40
14	0.998	972,361,103.95
15	0.998	970,416,381.74
16	0.998	968,475,548.98
17	0.998	966,538,597.88
18	0.998	964,605,520.69
19	0.998	962,676,309.65
20	0.998	960,750,957.03

Notes: Column X indicates the discount rates of 0.1% and 0.2% (1.0 - 0.001 = 0.999 and 1.0 - 0.002 = 0.998).
Column Z indicates the discounted $ figures for each year ($1,000,000,000) * $(0.999)^n$.

Table 1

A Comparison of the Current Funding Method with the Proposed Funding Method

	Current Funding Method	Proposed Funding Method
1	Uncertainty is the norm, for the present and the future	Certainty is the norm, for the present and the future
2	Allocation figures are unpredictable.	Allocation figures can be precisely predicted.
3	Bureaucracy is rampant both at the state and the institutional levels.	Bureaucracy is minimal both at the state and the institutional levels.
4	Rules, regulations, monitoring, reports are abundant both at the state and the institutional levels.	Rules, regulations, monitoring, reports are minimal both at the state and the institutional levels.
5	Institutions operate on a crises-driven mode.	Institutions can plan and operate on long-term development plan.
6	Perpetual dependency of the state-institutional relationship.	Opportunities for minimizing institutional dependency on state.
7	Incentives are minimal for quality improvements in higher education.	A myriad of opportunities for quality improvements in higher education.
8	Sustainability of higher education is in the hands of taxpayers.	Sustainability of higher education is in the hands of higher education administrators.
9	Saving is penalized.	Incentive to save and accumulate funds for future.
10	Status quo maintained.	Visionary approach.